Folder Structure

* Main.java: objects messaging will happen there (acts as a views layer)
* Services: Business logic
  + – CartServices: addToCart, removeFromCart, resetCart,
  + – shippingServices : calculateShippingCost
  + - checkoutServices: checkout(Cart, Customer)
* Models: contains both Interfaces and implementations
  + Implementations
    - Customer
    - Cart
    - Product
    - ShippableImpel
    - ExpirableImpel
    - ShippableProduct
    - ExpirableProduct
    - ShippableAndExpirableProduct
  + Interfaces
    - *IShippable*
    - *IExpirable*
    - *IShippableItem*
  + Factory
    - ProductFactory: acts as a public method(interface) for creating all product types.
* Exceptions: Custom Errors

Basic Entities:

Customer

Attributes

* Name: String
* Email: String
* Balance: double
* Cart: Cart

Product

* Name: String
* Price: double
* Quantity: int

Cart

Attributes

* Products: Map<Product, int>

Behaviour:

* addProduct(Product): insert the product into the cart if the product qty is not 0
* getProducts: Map<Product, int>
* getProductByName(): Product